Behind the Invisible Curtain at the U.S. EPA Clean Air Scientific Advisory Committee (CASAC): What CASAC Does and How

Speaker:
H. Christopher Frey, North Carolina State University
Moderator:
Holly S. Stallworth, U.S. Environmental Protection Agency

Air & Waste Management Association
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Presenter Bio

Dr. H. Christopher Frey is Distinguished University Professor of Environmental Engineering in the Department of Civil, Construction, and Environmental Engineering at NC State. His research activities are in: measurement and modeling of real-world fuel use and emissions of onroad and nonroad vehicles; measurement and modeling of human exposure to air pollutants; environmental risk analysis, quantification of sensitivity, uncertainty, and variability in systems models; and and modeling and evaluation of energy and environmental control systems. He is Chair of the EPA Clean Air Scientific Advisory Committee and has previously served on CASAC review panels for all six criteria pollutants regulated under the National Ambient Air Quality Standards. He is past president and a fellow of the Society for Risk Analysis and a fellow of the Air & Waste Management Association. Dr. Frey has a B.S. Mechanical Engineering from the University of Virginia, and from Carnegie Mellon University he has a Master of Engineering in Mechanical Engineering and PhD in Engineering and Public Policy.

Moderator Bio

Dr. Holly Stallworth is an economist in EPA's Science Advisory Board Staff Office. She has been at EPA since 1980 and Designated Federal Officer (DFO) for the Clean Air Scientific Advisory Committee (CASAC) since 2009. In that capacity, she has managed the chartered CASAC as well as some of its panels, including panels on ozone, particulate matter and oxides of nitrogen and sulfur. As DFO, she recruits scientists who serve on the chartered CASAC as well as CASAC panels. She also assists the Chair in drafting and editing CASAC reports so that they clearly reflect CASAC's consensus response to EPA's charge questions. Finally, she is responsible for the day-to-day administration of CASAC, ensuring that the requirements of the Federal Advisory Committee Act (FACA) are met through open meetings announced in the Federal Register, posting minutes on the CASAC website (www.epa.gov/casac) and providing opportunities for public comment at CASAC meetings.

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H. Christopher Frey

NC STATE UNIVERSITY

Department of Civil, Construction, and Environmental Engineering
North Carolina State University
Raleigh, NC 27695

Prepared for:
Air & Waste Management Association

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DISCLAIMER

- These are my **personal views**
- They do not represent any official position of U.S. Environmental Protection Agency (EPA) or the EPA Clean Air Scientific Advisory Committee (CASAC)

Overview

- Statutory Mandate: NAAQS, CASAC
- CASAC's Charter
- NAAQS Review Process
- CASAC Meetings
- Appointment of Members: CASAC, Panels
- FACA and CASAC
- Scope of CASAC
- CASAC, NAAQS and the Courts
- EPA Inspector General's Report
- Summary of Recent CASAC Activities
- Broad Science-based Issues

CASAC

- Clean Air Scientific Advisory Committee (CASAC)
- Independent advice to the EPA Administrator on technical bases for National Ambient Air Quality Standards (NAAQS).
- Established in 1977 under the Clean Air Act (CAA) Amendments of 1977

Statutory Mandate for National Ambient Air Quality Standards

- Section 108 of Clean Air Act
  - Identify and list certain air pollutants
  - Issue **air quality criteria** for those pollutants.
  - In Administrator's "judgment, cause or contribute to air pollution which may reasonably be anticipated to **endanger public health or welfare**;"
  - "the presence of which in the ambient air results from **numerous or diverse mobile or stationary sources**;"
  - "**accurately reflect the latest scientific knowledge**"

National Ambient Air Quality Standards: "Primary Standard"

- "the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an **adequate margin of safety**, are **requisite to protect the public health**."
  - Intended to address uncertainties
  - Reasonable degree of protection
  - Does not require zero risk
  - Interpretation has been reviewed in numerous court cases

"Adequate Margin of Safety"

Factors considered by EPA:

- nature and severity of the health effects
- size of sensitive population(s) at risk, and
- the kind and degree of uncertainties

National Ambient Air Quality Standards: "Secondary Standard"

- "specify a level of air quality the attainment and maintenance of which, in the judgment of the Administrator, based on such criteria, is **requisite to protect the public welfare** from any known or anticipated adverse effects associated with the presence of [the] pollutant in the ambient air."
- "Welfare" generally refers to endpoints other than human health. Examples
  - Ecological impact
  - Reduction in visibility
  - Damage to materials

Cost and Standard Setting

- In setting a NAAQS, EPA may not consider costs of implementing the standards (Whitman v. American Trucking Associations, 2001).
- "[a]ttainability and technological feasibility are not relevant considerations in the promulgation of national ambient air quality standards." (American Petroleum Institute v. Costle)

Key Elements of a NAAQS

- Indicator (Pollutant)
- Level
- Averaging Time
- Form

Current National Ambient Air Quality Standards (NAAQS) as of October 2013

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
CO	primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead	primary and secondary	Rolling 3 month average	0.15 µg/m^3	Not to be exceeded
NO_2	primary and secondary	Annual	53 ppb	Annual mean
	primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
O_3	primary and secondary	8-hour	0.075 ppm	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
$PM_{2.5}$	primary	Annual	12.0 µg/m^3	annual mean, averaged over 3 years
	secondary		15.0 µg/m^3	
	primary and secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
SO_2	primary	1-hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Primary (health-based) and secondary (welfare-based) standards. Units of measure are parts per million (ppm), parts per billion (ppb) or micrograms per cubic meter of air (µg/m^3). For more information about the standards, visit http://www.epa.gov/ttn/naaqs/.

Statutory Mandate for Five Year Review Cycle

- Section 109(d)(1) requires that "not later than December 31, 1980, and at **5-year intervals** thereafter, the Administrator shall complete a **thorough review** of the criteria published under section 108 and the national ambient air quality standards . . . and **shall make such revisions in such criteria and standards** and **promulgate such new standards** as may be appropriate . . . ."

Statutory Mandate for CASAC

- Section 109(d)(2) requires that an independent scientific review committee
  - "shall complete a **review of the criteria** . . .
  - "and the national primary and secondary ambient air quality standards . . .
  - "and shall **recommend to the Administrator** any **new** . . . standards and **revisions** of existing criteria and standards as may be appropriate . . . ."

CASAC's Charter

a) (…) recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate

b) Advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards

c) Describe the research efforts necessary to provide the required information

CASAC's Charter

d) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity

e) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards

NOTE: (e) is not part of the standards review process and overlaps with the scope of CAAAC and ACCACA

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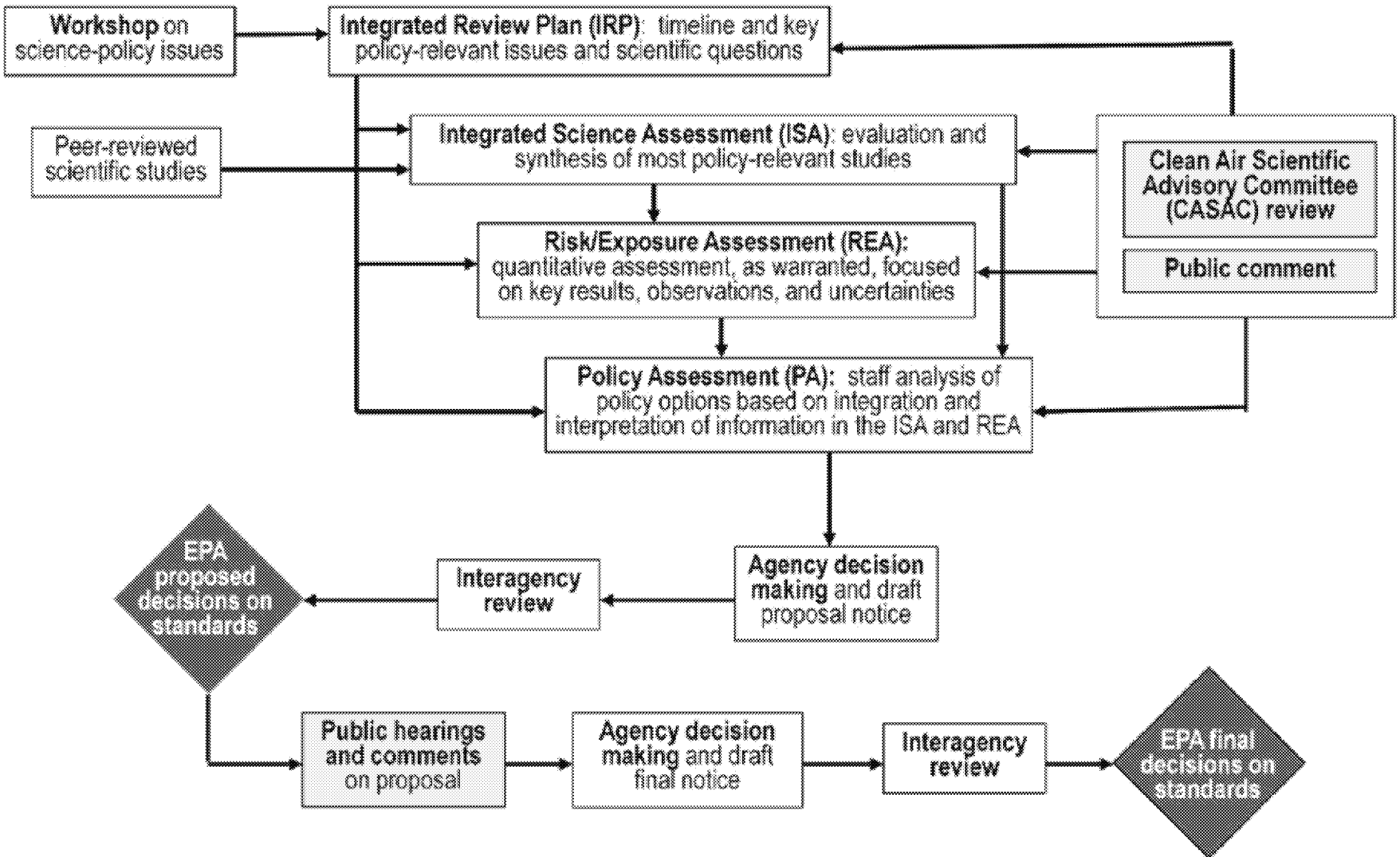
NAAQS Review Process
(since 2006, with revisions)



NAAQS Review Process

- **IRP** Integrated Review Plan
- **ISA** Integrated Science Assessment
- **REA** Risk and Exposure Assessment
- **PA** Policy Assessment

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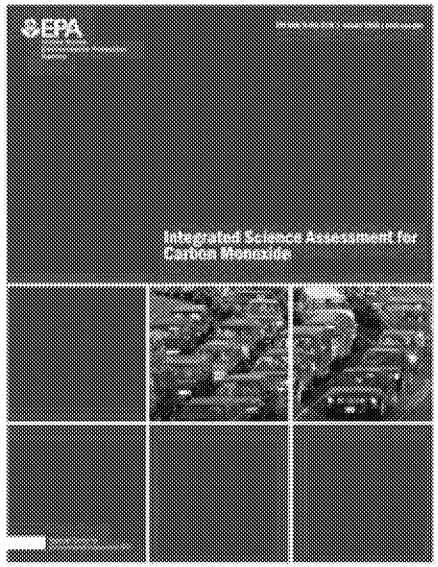
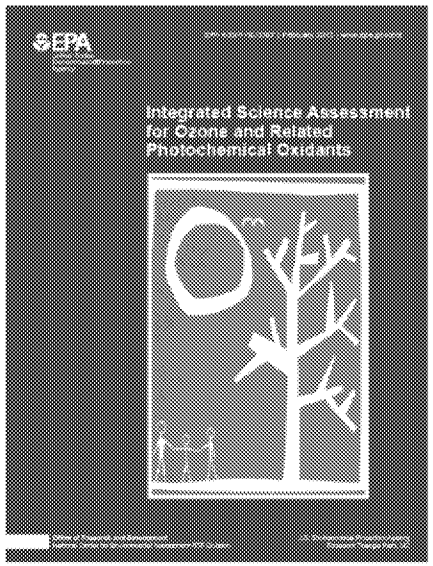
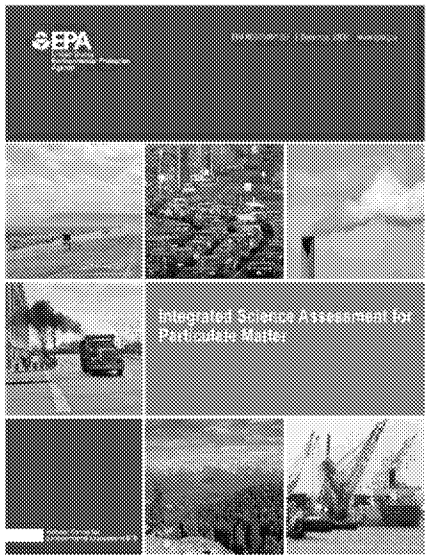
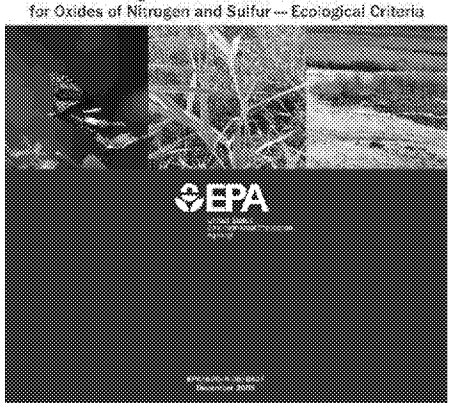
Integrated Science Assessments

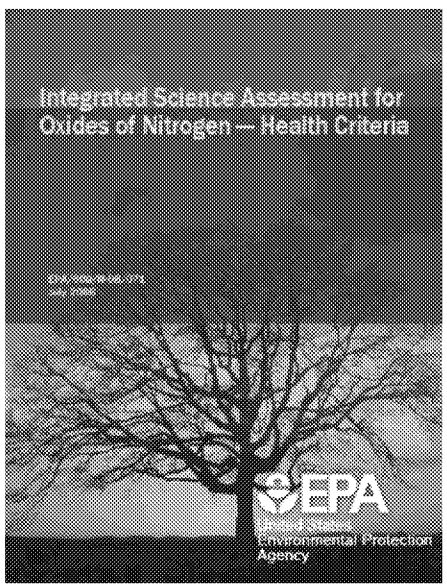


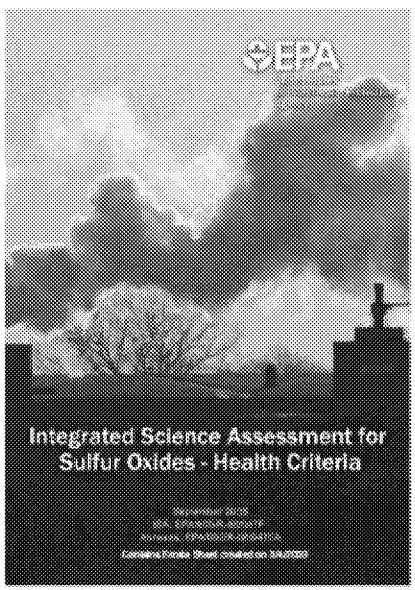


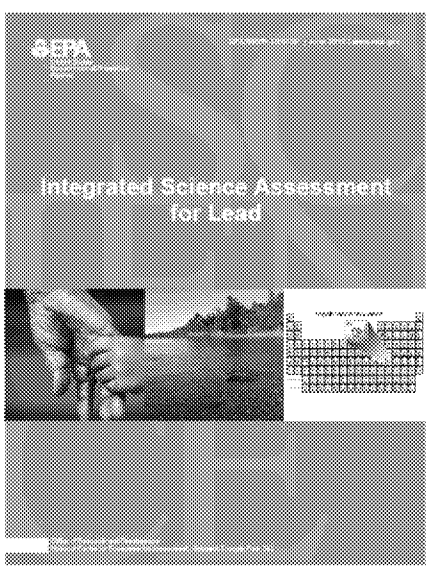


Integrated Science Assessment for Oxides of Nitrogen and Sulfur — Ecological Criteria









NAAQS Review Process

- Timing (example):
  - From IRP to last draft of PA is typically 3 years
  - Consultation (now review): IRP
  - Meeting 1: 1st draft ISA
  - Meeting 2: 2nd draft ISA, 1st draft REA
  - Meeting 3: 3rd draft ISA (?), 2nd draft REA, 1st draft PA
  - Meeting 4: 2nd draft PA

  Each meeting is typically 1.5 to 2 days, held in Research Triangle Park, NC area

Preparing for a CASAC Meeting

- EPA staff (NCEA, OAQPS) prepare draft document(s) for review (ISA, REA, PA)
- EPA staff prepare draft charge questions
- Iterate with panel chair on draft charge questions
- Panel chair assigns charge questions to panel members based on topic and expertise
- Typically aim for 60 days of review time before panel meeting
- Panelists prepare individual “pre-meeting” written comments

At a CASAC Meeting

- EPA staff (NCEA, OAQPS) give a presentation on the draft document(s)
- Opportunity for clarifying questions from panel members
- Public comment
- Opportunity for clarifying questions from panel members
- Panelists must present and deliberate their comments in the public session
- “Lead discussant” for each charge question drafts consensus response
- Seek agreement on key points to be included in letter to Administrator and responses to charge questions

After a CASAC Meeting

- Chair prepares draft letter with attached charge questions and responses
- Panel reviews and finalize in a post-meeting teleconference (public notice, open to the public, opportunity for public comment)
- Seek panel consensus and concordance with draft letter
- Panelists can submit final ‘post-meeting’ written comments
- Quality review by chartered CASAC
- Letter sent to Administrator

Appointment of CASAC Members

- Annual nomination process
- Published in Federal Register
- Opportunity for public comment
- Appointed by EPA Administrator
- Members of chartered CASAC serve a 3 year term
- Can be reappointed for a 2nd 3 year term
- Chair is appointed for a 2 year term. Can be renewed for a 2nd 2 year term

Chartered CASAC Members

- Must include
  - Seven members
  - A physician
  - A member of the National Academy of Sciences (or equivalent – e.g., IOM)
  - One person representing state air control agencies

CASAC Review Panels

- The 7 member statutory CASAC is augmented for specific review activities:
  - Ozone Review Panel
  - Oxides of Nitrogen Review Panel
  - Oxides of Sulfur Review Panel
  - Carbon Monoxide Review Panel
  - Lead Review Panel
  - Particulate Matter Review Panel
  - Secondary SO_x and NO_x Review Panel
  - Air quality monitoring and modeling review panel

CASAC Review Panels

- Opportunity for the public to nominate candidates for the panels
- Balance of scientific and technical expertise
- Sufficient scope of scientific and technical expertise to review and evaluate the ISA, REA, and PA
- Panel members are appointed by the SAB director
- Chartered CASAC members serve on each panel
- A member of Chartered CASAC chairs each panel
- Chartered CASAC augmented by typically ~15 experts per panel

Chartered CASAC and Advise to Administrator

- All advice from CASAC to the Administrator is from the Chartered CASAC
- Panels draft CASAC letter reports and appendices (e.g., responses to charge questions)
- Typically seek panel consensus
- “Quality Review” by chartered CASAC

Panel Composition

- Technical expertise (example of Lead review panel):
  - Atmospheric sciences, air quality
  - Transport and fate
  - Exposure assessment
  - Toxicology
  - Biokinetic modeling
  - Epidemiology
  - Risk assessment
  - Biostatistics
  - Ecology

CASAC and Panel Members

- Appointed as “Special Government Employees” (SGE)
  - Limited service to the Government
  - Provide outside expertise or perspectives
  - Advisory or committee members
  - Subject to ethics rules (examples)
    - » Financial disclosure and filing
    - » Conflict of Interest
    - » Prohibition of “representation”
    - » May not further private interests
    - » Gifts, bribery
    - » Hatch Act
    - » Fundraising
    - » Expert testimony

CASAC and FACA

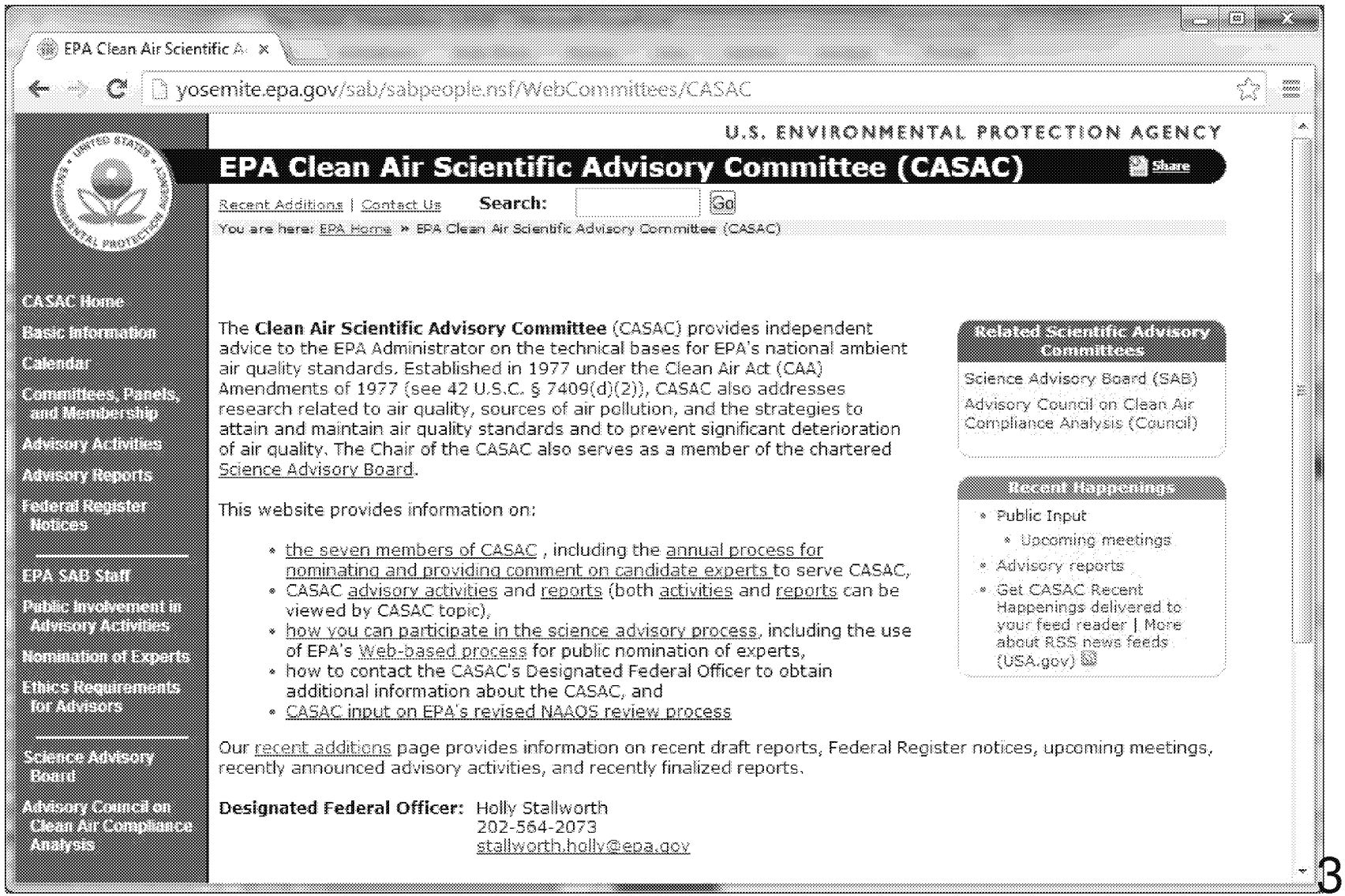
- FACA: Federal Advisory Committee Act
- CASAC operates as a FACA committee
- Public notice of meetings
- Meetings held in public
- Opportunity for public comment
- Deliberations are in public
- CASAC issues written letter reports with attachments to the Administrator

Public Comment

- CASAC deals with scientific issues related to advising the Administrator - e.g., indicator, level, averaging time, and form of an existing NAAQS, revised NAAQS, possible new NAAQS
- Public comments based on peer reviewed science can be very useful
- Opportunity for public comment is provided at every CASAC meeting
- Opportunity for public nomination of candidates for CASAC and CASAC Panels

Chartered CASAC: Current Members

CASAC Website



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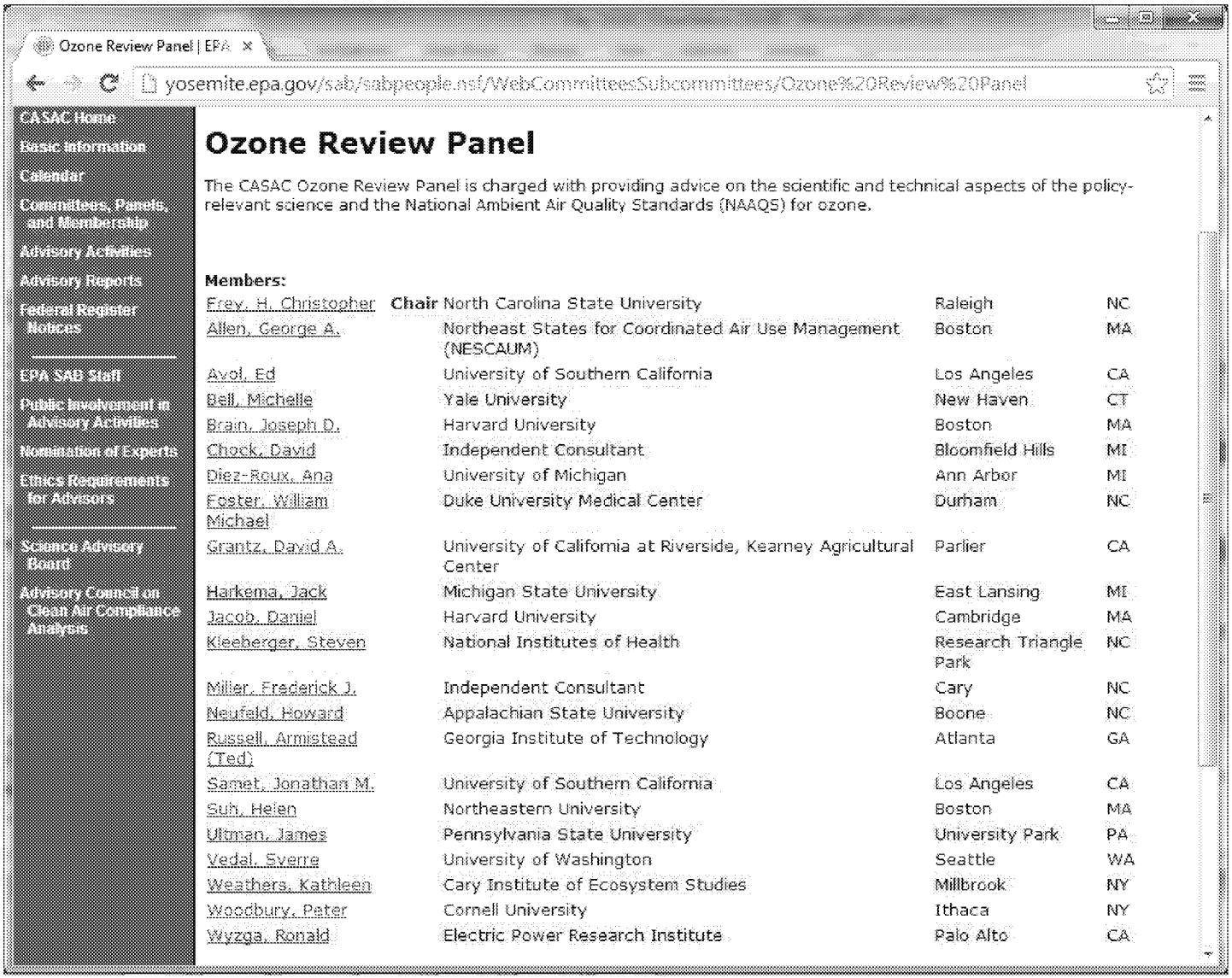
CASAC Current Panels: Ozone



Ozone Review Panel | EPA

yosemite.epa.gov/sab/sabpeople.nsf/WebCommitteesSubcommittees/Ozone%20Review%20Panel

CASAC Home
Basic Information
Calendar
Committees, Panels, and Membership
Advisory Activities
Advisory Reports
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EPA SAB Staff
Public Involvement in Advisory Activities
Nomination of Experts
Ethics Requirements for Advisors

Science Advisory Board
Advisory Council on Clean Air Compliance Analysis

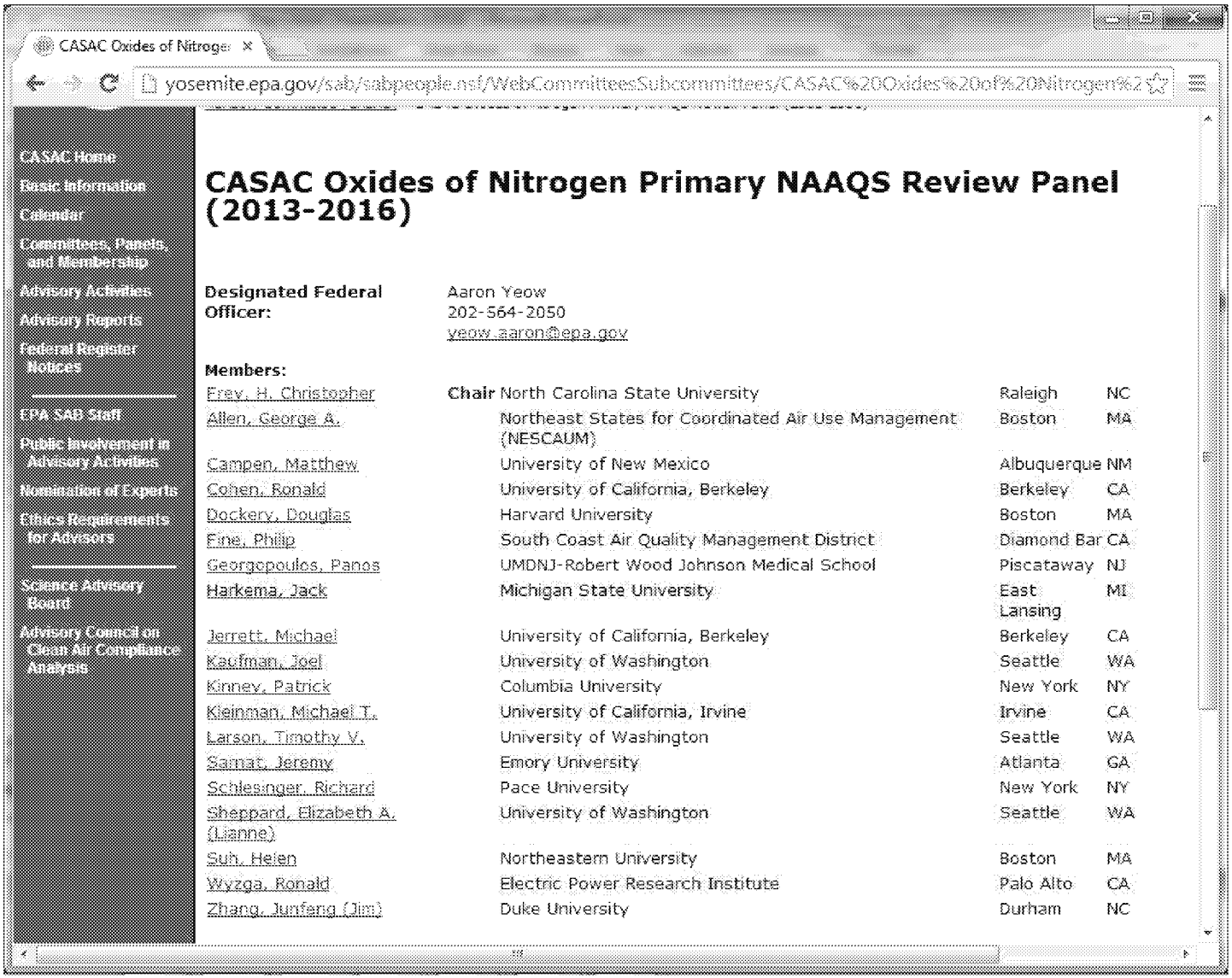
Ozone Review Panel

The CASAC Ozone Review Panel is charged with providing advice on the scientific and technical aspects of the policy-relevant science and the National Ambient Air Quality Standards (NAAQS) for ozone.

Members:

Frey, H. Christopher	**Chair**	North Carolina State University	Raleigh	NC
Allen, George A.		Northeast States for Coordinated Air Use Management (NESCAUM)	Boston	MA
Avol, Ed		University of Southern California	Los Angeles	CA
Bell, Michelle		Yale University	New Haven	CT
Brain, Joseph D.		Harvard University	Boston	MA
Chock, David		Independent Consultant	Bloomfield Hills	MI
Diez-Roux, Ana		University of Michigan	Ann Arbor	MI
Foster, William Michael		Duke University Medical Center	Durham	NC
Grantz, David A.		University of California at Riverside, Kearney Agricultural Center	Parlier	CA
Harkema, Jack		Michigan State University	East Lansing	MI
Jacob, Daniel		Harvard University	Cambridge	MA
Kleeberger, Steven		National Institutes of Health	Research Triangle Park	NC
Miller, Frederick J.		Independent Consultant	Cary	NC
Neufeld, Howard		Appalachian State University	Boone	NC
Russell, Armistead (Ted)		Georgia Institute of Technology	Atlanta	GA
Samet, Jonathan M.		University of Southern California	Los Angeles	CA
Suh, Helen		Northeastern University	Boston	MA
Ultman, James		Pennsylvania State University	University Park	PA
Vedal, Sverre		University of Washington	Seattle	WA
Weathers, Kathleen		Cary Institute of Ecosystem Studies	Millbrook	NY
Woodbury, Peter		Cornell University	Ithaca	NY
Wyzga, Ronald		Electric Power Research Institute	Palo Alto	CA

CASAC Current Panels: Oxides of Nitrogen



CASAC Oxides of Nitrogen Primary NAAQS Review Panel (2013-2016)

Designated Federal Officer: Aaron Yeow, 202-564-2050, yeow.aaron@epa.gov

Members:

Frey, H. Christopher	**Chair** North Carolina State University	Raleigh	NC
Allen, George A.	Northeast States for Coordinated Air Use Management (NESCAUM)	Boston	MA
Campen, Matthew	University of New Mexico	Albuquerque	NM
Cohen, Ronald	University of California, Berkeley	Berkeley	CA
Dockery, Douglas	Harvard University	Boston	MA
Fine, Philip	South Coast Air Quality Management District	Diamond Bar	CA
Georgopoulos, Panos	UMDNJ-Robert Wood Johnson Medical School	Piscataway	NJ
Harkema, Jack	Michigan State University	East Lansing	MI
Jerrett, Michael	University of California, Berkeley	Berkeley	CA
Kaufman, Joel	University of Washington	Seattle	WA
Kinney, Patrick	Columbia University	New York	NY
Kleinman, Michael T.	University of California, Irvine	Irvine	CA
Larson, Timothy V.	University of Washington	Seattle	WA
Samat, Jeremy	Emory University	Atlanta	GA
Schlesinger, Richard	Pace University	New York	NY
Sheppard, Elizabeth A. (Lianne)	University of Washington	Seattle	WA
Suh, Helen	Northeastern University	Boston	MA
Wyzga, Ronald	Electric Power Research Institute	Palo Alto	CA
Zhang, Junfeng (Jim)	Duke University	Durham	NC

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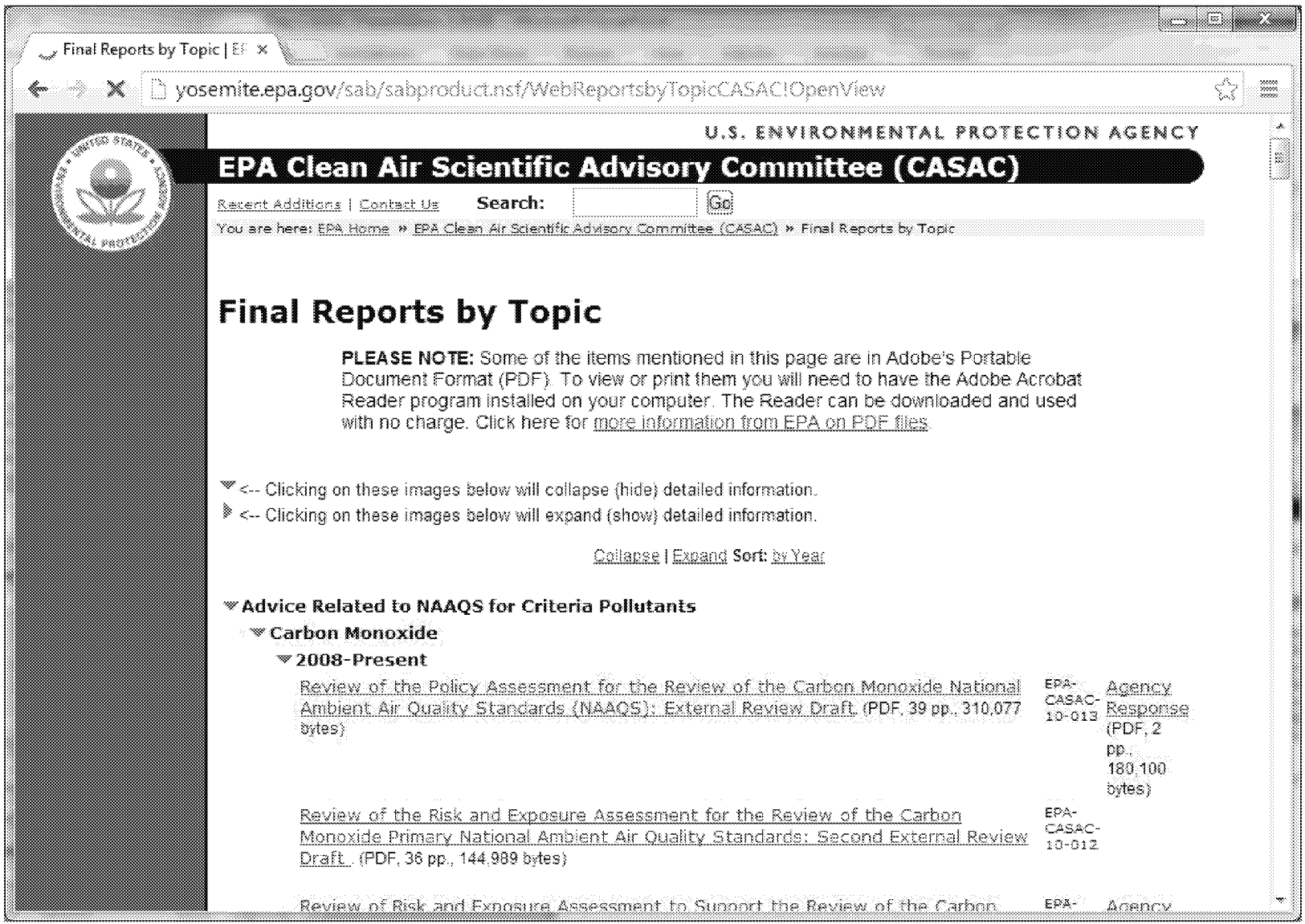
CASAC Reports are Publicly Available



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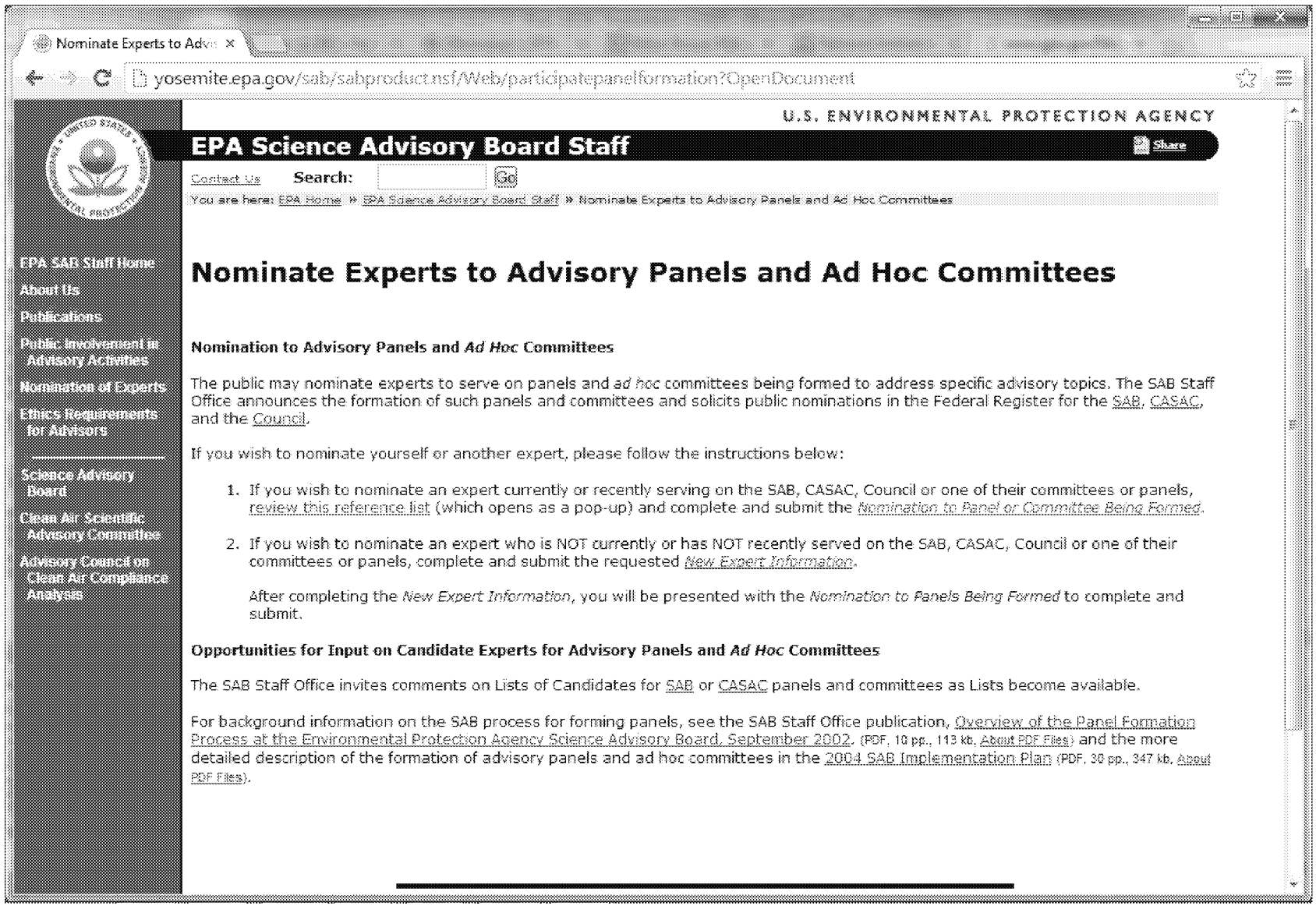
Nominating Experts to Advisory Panels and Ad Hoc Committees



Scope of CASAC Review and Advice

- Existing NAAQS
- Possible alternatives to existing NAAQS
- New NAAQS?
- Retire an existing NAAQS?

Beyond the Scope of CASAC

- New Source Performance Standards
- National Emission Standards for Hazardous Air Pollutants
- New Source Review (NSR) (BACT/LAER)
- (etc.)

Science and Policy

- CASAC differs from some other FACA committees
  - Statutory mandate to advise the Administrator on a specific regulatory-related scope
  - Judgments regarding indicator, level, averaging time, and form of a NAAQS
  - "adequate margin of safety"
  - Court decisions acknowledge role for CASAC in providing scientific and policy-relevant advice.

CASAC and the Courts

- There have been many court cases related to the NAAQS, some of which that have touched upon CASAC and its role
- The most recent:
  - Mississippi v. EPA (2013)
  - Court of Appeals for the D.C. Circuit affirmed EPA's 2008 NAAQS for ozone of 0.075 ppm
  - "Had CASAC reached a scientific conclusion that adverse health effects were likely to occur at the 0.070 ppm level, EPA's failure to justify its uncertainty regarding the existence of adverse health effects at this level would be unacceptable"

CASAC and the Courts

- Here's what CASAC said about this in letters to the Administrator:
  - "the current primary 8-hr standard of 0.08 ppm needs to be substantially reduced to be protective of human health, particularly in sensitive subpopulations"
  - "overwhelming scientific evidence"
  - "that the level of the current primary ozone standard should be lowered from 0.08 ppm to no greater than 0.070 ppm."

Conflict of Interest?

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MILLOY: Clearing the air on the EPA

EPA grants to its advisers triggers conflict-of-interest query

COMMENTS (0) Aa SIZE + / - PRINT | REPRINTS

By Steve Milloy - The Washington Times Wednesday, March 7, 2012

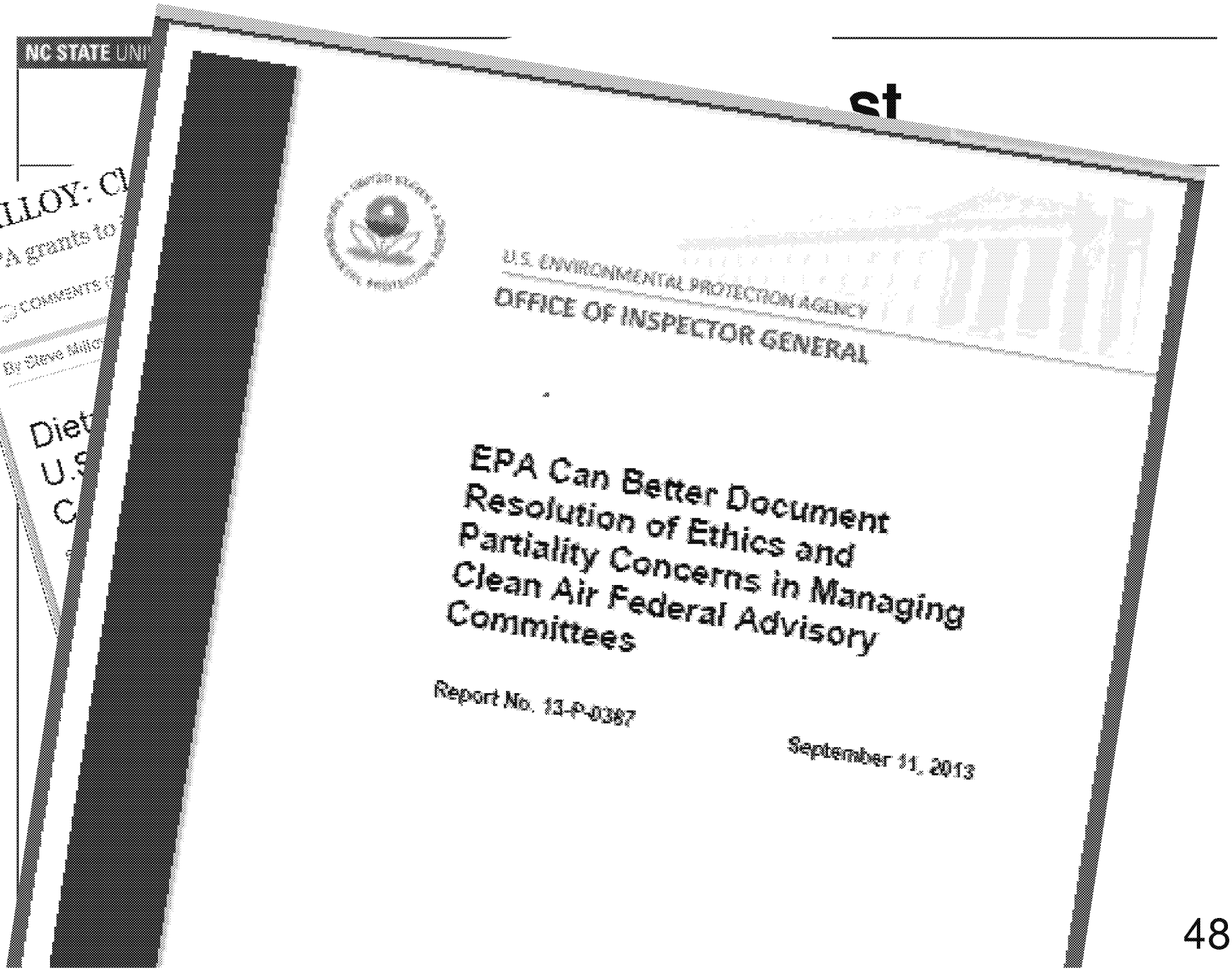
Rep. Joe Barton last week took the first official baby step in exposing the Environmental Protection Agency's corrupt scientific advisory process.

In his opening statement at last week's House Energy and Commerce hearing about the EPA's 2013 budget, Mr. Barton of Texas came as close as any Republican ever has to reading EPA Director Lisa P. Jackson the riot act about the agency's ever-increasing contempt for science, economics, Congress and even the Constitution.

While much of the aforesaid is widely known but typically left unsaid by timid congressional Republicans, Mr. Barton also raised an issue that should shock the conscience of anyone concerned about ethics in government: financial conflict-of-interest among EPA science advisers.

"I want to discuss the EPA's science and research funding and support activities such as the quality assurance supervisory budget and the committees that monitor the EPA's internal activities," Mr. Barton told Ms Jackson.

"You fund research with grants to people who also serve on your review committees. Is this a conflict of interest? Almost every single member of your Clean Air Science Advisory Committee has been directly or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COMMENTS
By Steve Milo
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U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL
EPA Can Better Document Resolution of Ethics and Partiality Concerns in Managing Clean Air Federal Advisory Committees
Report No. 13-P-0387
September 11, 2013

Inspector General Findings

- According to OMB, receipt of a federal grant is not a financial conflict of interest: For grants awarded through a competitive peer review process, agency's potential to influence the scientist's research is limited
- A member's research or grant is a potential concern if a committee or panel plans to address work performed under the grant
- EPA has adequate procedures for identifying financial conflicts of interest

Inspector General Findings

- SAB Staff Office has adequate procedures for identifying independence and impartiality concerns.
- Documentation can be improved.
- Federal agencies have discretion on setting time limits for committee membership and for procedures for making exceptions.
- EPA has established procedures for “balance” that go beyond minimum requirements
- The OIG also recommended that EPA/NCEA more systematically identify “influential scientific information” for submission to peer review.

Misconceptions?

- CASAC does not set the NAAQS
  - CASAC advises the Administrator
  - The Administrator has the authority to make decisions regarding a NAAQS
    - » Indicator
    - » Level
    - » averaging time
    - » form

Key Science Issues (Examples)

- Identification of adverse effects
- Weight of evidence determinations
- Basis for quantifying dose-response
  - Clinical studies
  - Toxicology
  - Epidemiologic studies
  - Other (e.g., surveys)
- Metric of exposure
  - Exposure concentration?
  - Ambient concentration?
- Background levels
- Air quality monitoring methods and data
- Air quality modeling
- Quantification of ecosystem effects
- Quantification of other welfare effects

Framework for Causal Determination Used in ISAs

Weight of Evidence for Causal Determination

- Causal relationship
- Likely to be a causal relationship
- Suggestive of a causal relationship
- Inadequate to infer a causal relationship
- Not likely to be a causal relationship

ISAs: Current Framework for Causality Determinations

Causal relationship	Evidence is sufficient to conclude that there is a causal relationship with relevant pollutant exposures (e.g., doses or exposures generally within one to two orders of magnitude of current levels). That is, the pollutant has been shown to result in health effects in studies in which chance, confounding, and other biases could be ruled out with reasonable confidence. For example: (1) controlled human exposure studies that demonstrate consistent effects; or (2) observational studies that cannot be explained by plausible alternatives or that are supported by other lines of evidence (e.g., animal studies or mode of action information). Generally, the determination is based on multiple high-quality studies conducted by multiple research groups.
Likely to be a causal relationship	Evidence is sufficient to conclude that a causal relationship is likely to exist with relevant pollutant exposures. That is, the pollutant has been shown to result in health effects in studies where results are not explained by chance, confounding, and other biases, but uncertainties remain in the evidence overall. For example: (1) observational studies show an association, but copollutant exposures are difficult to address and/or other lines of evidence (controlled human exposure, animal, or mode of action information) are limited or inconsistent; or (2) animal toxicological evidence from multiple studies from different laboratories demonstrate effects, but limited or no human data are available. Generally, the determination is based on multiple high-quality studies.
Suggestive of a causal relationship	Evidence is suggestive of a causal relationship with relevant pollutant exposures, but is limited. For example, (1) at least one high-quality epidemiologic study shows an association with a given health outcome although inconsistencies remain across other studies that are or are not of comparable quality; or (1) a well-conducted toxicological study, such as those conducted in the National Toxicology Program (NTP), shows effects relevant to humans in animal species.
Inadequate to infer a causal relationship	Evidence is inadequate to determine that a causal relationship exists with relevant pollutant exposures. The available studies are of insufficient quantity, quality, consistency, or statistical power to permit a conclusion regarding the presence or absence of an effect.
Not likely to be a causal relationship	Evidence indicates there is no causal relationship with relevant pollutant exposures. Several adequate studies, covering the full range of levels of exposure that human beings are known to encounter and considering at-risk populations and lifestages, are mutually consistent in not showing an effect at any level of exposure.

Rule out chance, confounding, and other biases
Consistency, coherence, biological plausibility, high-quality studies

Multiple, high-quality studies show effects
Uncertainty remains

Evidence is limited
Associations found in some high-quality studies but other results inconsistent

Evidence is of insufficient quantity, quality, consistency

Multiple studies show no effect across exposure concentrations

Matrix of Causal Determinations from Recent ISAs

		Causality Determination					
Outcome Category	Exposure Period	NO_2 (2008 ISA)	SO_2 (2008 ISA)	$PM_{2.5}$ (2009 ISA)	$PM_{10-2.5}$ (2009 ISA)	CO (2010 ISA)	O_3 (2013 ISA)
Cardiovascular Morbidity	Short-term	Inadequate	Inadequate	**Causal**	Suggestive	Likely Causal	Likely Causal
Respiratory Morbidity	Short-term	Likely Causal	**Causal**	Likely Causal	Suggestive	Suggestive	**Causal**
Mortality	Short-term	Suggestive	Suggestive	**Causal**	Suggestive	Suggestive	Likely Causal
Cardiovascular Morbidity	Long-term	Inadequate	Inadequate	**Causal**	Inadequate	Inadequate	Suggestive
Respiratory Morbidity	Long-term	Suggestive	Inadequate	Likely Causal	Inadequate	Inadequate	Likely Causal
Developmental and Birth Outcomes	Long-term	Inadequate	Inadequate	Suggestive	Inadequate	Suggestive	Suggestive
Mortality	Long-term	Inadequate	Inadequate	**Causal**	Inadequate	Suggestive of No Causal Relationship	Suggestive

Causality Determinations for Lead

Examples:

- Causal Relationship
  - Children – Cognitive Function Decrements
    - Externalizing Behavior (Attention, Impulsivity, Hyperactivity)
  - Adults
    - Hypertension
    - Coronary Heart Disease
    - Hematologic Effects
    - Reproductive Effects
- Likely Causal
  - Children
    - Internalizing Behaviors
    - Auditory Function Decrements
    - Motor Function Decrements
  - Adults
    - Cognitive Function Decrements
    - Psychopathological Effects
    - Immune System Effects
    - Cancer

CASAC and the Administrator

- CASAC advises the Administrator
- The Administrator does not always follow the advice.

Summary of Recent CASAC Advice: Carbon Monoxide

- CASAC expressed a preference for a lower standard but said current evidence also supports retaining the current suite of standards.
- CASAC acknowledged their preference for a lower standard was based on a judgment as to the weight of the epidemiological evidence.
- EPA's final August 2011 decision to retain the primary standard and not set a secondary standard was **compatible** with CASAC's advice.

Summary of Recent CASAC Advice: Lead

- In 2013, CASAC has provided advice that the current standard is adequate
- EPA has not announced a decision regarding the outcome of this review cycle

Summary of Recent CASAC Advice: Oxides of Nitrogen

- CASAC had recommended the level of the one-hour NO_2 standard should be within the range of 80-100 ppb and not above 100 ppb.
- February 2010: EPA set a 1-hour standard at 100 ppb.
- EPA's decision was **consistent** with CASAC's advice.

Summary of Recent CASAC Advice: NO_x-SO_x Secondary Standard

- In 2011, CASAC had stated that the levels of the current NO_x and SO_x secondary NAAQS were not sufficient, nor the forms of those standards appropriate, to protect against adverse depositional effects.
- EPA's April 2012 rule-making that retained the existing NO_2 and SO_2 secondary standards was **NOT consistent** with CASAC's advice.

Summary of Recent CASAC Advice: Primary Ozone Standard

- For both the 2008 review cycle and a subsequent "reconsideration" of its advice, CASAC had unanimously recommended selection of an 8-hour average ozone NAAQS within the range of 0.060 to 0.070 ppm
- The White House's decision (Sept. 2011) to retain the 2008 NAAQS standard and withdraw EPA's proposal to tighten the standard to 0.070 ppm was **NOT consistent** with CASAC advice issued in March 2011 and in prior NAAQS review (2005 – 2008).

Summary of Recent CASAC Advice: Secondary Ozone Standard

- The same White House decision (Sept. 2011) also postponed any promulgation of the W126-based secondary standard, **contrary** to CASAC's advice.

Summary of Recent CASAC Advice: Particulate Matter Standard for $PM_{2.5}$

- EPA's Jan. 2013 rule-making that set the primary $PM_{2.5}$ annual standard to 12 ug/m^3 while keeping the 24-hour standard of 35 ug/m^3 was **consistent** with CASAC's advice.
- However, EPA decision to retain the secondary annual standard of 15 ug/m^3 **departed** from CASAC advice to introduce a new speciated PM light extinction indicator.
- Similarly, EPA retained the existing secondary 24-hour average of 35 ug/m^3 **contrary** to CASAC advice regarding a 24-hour light extinction-based indicator and level.

Summary of Recent CASAC Advice: Particulate Matter Standard for PM_{10}

- In its Sept. 2010 letter, CASAC recommended that the primary standard for PM_{10} should be revised downwards (below 150 ug/m^3).
- CASAC said that while current evidence is limited, it is sufficient to call into question the level of protection afforded by 150 µg/m^3.
- The Jan. 2013 decision to retain the current primary and secondary 24-hour average 150 ug/m^3 standard **departed** from CASAC's advice.

Summary of Recent CASAC Advice: Sulfur Dioxide Primary Standard

- CASAC recommended 50 to 150 ppb.
- EPA's June 2010 decision to establish the 1-hour 75 ppb standard was **consistent** with CASAC advice

Broad Issues

- Multipollutant air quality management
- Should any existing criteria pollutants be delisted?
- Should other pollutants be designated as criteria pollutants?
- How to deal with potential lack of thresholds and adverse effects near background levels
- How to deal with emerging issues: e.g., climate-air quality interactions

Accessing Information About CASAC

- All CASAC reports are available via

  www.epa.gov/casac

QUESTIONS

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Upcoming Webinar

Save the Date

Keeping the Cart out of the Ditch and $ in Your Pocket: Performing an Air Compliance Audit

Thursday, January 9, 2014

1:00pm-2:30pm (Eastern Time)

Presenters:

Ken Faulkner: P.E., Principal Environmental Engineer, FC&E Engineering, LLC

Betty Ruth Fox: is Counsel with Watkins & Eager

Chris Wells: Senior Attorney with the Mississippi Department of Environmental Quality's Environmental Compliance & Enforcement Division.

Moderator:

Dallas Baker: P.E, Environmental Engineer, Mississippi Department of Environmental Quality and President-Elect in 2014 of A&WMA.

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Upcoming Webinar

Save the Date

Towards Sustainable Value Chains

Wednesday, January 15, 2014

1:00pm-2:30pm (Eastern Time)

Presenters:

Jessica Wollmuth: Supply Chain Sustainability Practice Lead, CH2M HILL

Jameson Morrell: Senior Energy and Sustainability Management Consultant, CH2M HILL

Lyra Myers: Associate Director and Value Creation Agent for Roche's Supplier Relationship Center (SRC)

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If you have suggestions for other webinar topics, please email

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Gerald Armstrong

Member Services Representative

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